

**REMARKS**

**I. Formalities**

Applicant thanks the Examiner for indicating that the finality and the rejections of the previous Office Action have been withdrawn.

**II. Status of the Application**

Claims 1-6 are pending in the application. By the present Amendment, Applicant hereby amends claims 1, 3-4 and 6. Support for these amendments can be found in *at least* paragraphs 47-48 of the originally filed specification. Applicant also hereby adds claim 7 to provide more varied protection for the invention. Claims 1-7 are all the claims pending in the application. Claims 1-6 have been rejected.

The present amendment addresses each point of rejection raised by the Examiner. Favorable reconsideration is respectfully requested.

**III. Claim Rejections Under 35 U.S.C. §103 – Uemura in view of Torikai**

The Examiner has rejected claims 1-2 and 4-5 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Publication No. 2002/0158580 to Uemura *et al.* (hereinafter “Uemura”), in view of U.S. Patent No. 6,320,314 to Torikai *et al.* (hereinafter “Torikai”). Applicant respectfully traverses these rejections for *at least* the reasons set forth below.

In order for the Examiner to maintain a rejection under 35 U.S.C. §103, Uemura, Torikai, or some combination thereof, must teach or suggest all of the recitations of claims 1-2 and 4-5.

Applicant respectfully submits that neither Uemura, Torikai, nor any combination thereof, teaches or suggests all of the recitations of claims 1-2 and 4-5.

**A. Independent Claim 1**

Independent claim 1 requires (among other things):

...wherein each of said electrodes is formed by integrating a tungsten line and a molybdenum line with an end of said tungsten line opposed to an end of said molybdenum line; and

wherein said molybdenum line is welded to one of said molybdenum pipes.

The grounds of rejection allege that Uemura teaches a discharge vessel 1 which has electrodes 1*b* disposed on each end. However, Uemura fails to provide any teaching or suggestion whatsoever that each of said electrodes 1*b* are formed by integrating a tungsten line and a molybdenum line with an end of said tungsten line opposed to an end of said molybdenum line, wherein said molybdenum line is welded to one of said molybdenum pipes, as recited in claim 1. In stark contrast to the requirements of claim 1, Uemura teaches that each of the electrodes 1*b* is made solely of tungsten and includes an electrode rod 1*b*1. Paragraph 0039. No aspect of Uemura teaches, or even remotely suggests, that each of the electrodes 1*b* is formed by integrating a tungsten line and a molybdenum line, as claimed. Moreover, Torikai fails to remedy the deficient teachings of Uemura.

Therefore, Applicant respectfully submits that independent claim 1 is patentable over the applied references for *at least* these independent reasons. Further, Applicant respectfully

submits that the dependent claim 2 is allowable, *at least* by virtue of its dependency. Thus, Applicant respectfully requests that the Examiner withdraw these rejections.

**B. Independent Claim 4**

Independent claim 4 requires (among other things):

... wherein each of said electrodes is formed by integrating a tungsten line and a molybdenum line with an end of said tungsten line opposed to an end of said molybdenum line; and

wherein said molybdenum line is welded to one of said molybdenum pipes.

In view of the similarity between these requirements and the requirements discussed above with respect to independent claim 1, Applicant respectfully submits that arguments analogous to the foregoing arguments as to the patentability of independent claim 1 demonstrate the patentability of claim 4. As such, it is respectfully submitted that claim 4 is patentably distinguishable over the cited references *at least* for reasons analogous to those presented above. Further, Applicant submits that the dependent claim 5 is allowable *at least* by virtue of its dependency. Thus, the allowance of this claim is respectfully solicited of the Examiner.

**IV. Claim Rejections Under 35 U.S.C. §103 – Uemura in view of Torikai and Uchiyama**

The Examiner has rejected claims 3 and 6 under 35 U.S.C. §103(a) as being unpatentable over Uemura in view of Torikai and EP Patent No. 0859246 to Uchiyama *et al.* (hereinafter “Uchiyama”). Applicant respectfully traverses these rejections for *at least* the reasons set forth below.

**A. Independent Claim 3**

Independent claim 3 requires (among other things):

...wherein each of said electrodes is formed by integrating a tungsten line and a molybdenum line with an end of said tungsten line opposed to an end of said molybdenum line; and

wherein said molybdenum line is welded to one of said molybdenum pipes.

In view of the similarity between these requirements and the requirements discussed above with respect to independent claim 1, Applicant respectfully submits that arguments analogous to the foregoing arguments as to the patentability of independent claim 1 demonstrate the patentability of claim 3 over the cited Uemura and Torikai references. What is more, Uchiyama fails to remedy the deficient teachings of Uemura and Torikai. As such, it is respectfully submitted that claim 3 is patentably distinguishable over the cited references *at least* for reasons analogous to those presented above. Thus, the allowance of this claim is respectfully solicited of the Examiner.

**B. Independent Claim 6**

Independent claim 6 requires (among other things):

...wherein each of said electrodes is formed by integrating a tungsten line and a molybdenum line with an end of said tungsten line opposed to an end of said molybdenum line; and

wherein said molybdenum line is welded to one of said molybdenum pipes.


In view of the similarity between these requirements and the requirements discussed above with respect to independent claim 3, Applicant respectfully submits that arguments analogous to the foregoing arguments as to the patentability of independent claim 3 demonstrate the patentability of claim 6. As such, it is respectfully submitted that claim 3 is patentably distinguishable over the cited references *at least* for reasons analogous to those presented above. Thus, the allowance of this claim is respectfully solicited of the Examiner.

**V. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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**23373**

CUSTOMER NUMBER

Date: October 11, 2006